

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A method of operating a radio network, the method comprising:

providing a primary station (PS) and a plurality of secondary stations (SS1, SS2, SS3), determining, via the primary station, an estimated level of interest by users of secondary stations in a service by providing a plurality of random access slots that are selectively configured for permitting a temporary or permanent allocation of a portion of the plurality of random access slots based on the estimated level of interest of the users of the secondary stations, and

indicating, via a secondary station of the plurality of secondary stations, the estimated level of interest by transmitting a predetermined signal in a preselected one of the plurality of random access slots, the estimated level of interest based on at least a threshold value.

2. (Previously Presented) The method as claimed in claim 1, wherein the primary station computes the estimated level of interest from at least a number of transmitted indications and selects a transmission mode of the service in dependence on whether the estimated level of interest is relatively high or relatively low.

3. (Previously Presented) The method as claimed in claim 2, wherein the transmission mode for the relatively high level of interest is point-to-multipoint.

4. (Previously Presented) The method as claimed in claim 2, wherein the transmission mode for the relatively low level of interest is point-to-point.

5. (Previously Presented) The method as claimed in claim 2, wherein the primary station sets the threshold value for determining the transmission mode of the service and, when the number of transmitted indications exceeds the threshold value, the transmission mode for the relatively high level of interest is operated.

6. (Previously Presented) The method as claimed in claim 1, wherein each access slot of the plurality of random access slots includes a combination of one time slot and one signature, and wherein the primary station maps each of the plurality of random access slots to a different service such that all the secondary stations interested in one service transmit using one of the plurality of random access slots, and in that each combination of one time slot and one signature is contained in not more than one of the plurality of random access slots.

7. (Previously Presented) The method as claimed in claim 6, wherein each of the plurality of random access slots uses the same signature and in that each random access slot in the plurality of random access slots uses a different time slot.

8. (Previously Presented) The method as claimed in claim 6, wherein each of the plurality of random access slots uses the same time slot and in that each random access slot in the plurality of random access slots uses a different signature.

9. (Cancelled)

10. (Cancelled)

11. (Previously Presented) The method as claimed in claim 1, wherein the level of interest is transmitted as spread spectrum signals and a number of indications is estimated by estimating a number of correlation peaks in a given random access time slot.

12. (Previously Presented) The method as claimed in claim 1, wherein the level of interest is transmitted as spread spectrum signals and a number of indications is estimated by estimating a received energy in a given random access slot.

13. (Previously Presented) The method as claimed in claim 1, wherein the secondary stations are allocated to a respective one of two or more pluralities of access slots and in that a secondary station of the plurality of secondary stations desiring to transmit an indication of interest, transmits in its allocated plurality of random access slots.

14. (Previously Presented) The method as claimed in claim 13, wherein when an estimated level of interest exceeds a predetermined level of interest, the primary station instructs the plurality of secondary stations waiting to transmit in their allocated access slot not to transmit.

15. (Previously Presented) The method as claimed in claim 1, wherein a secondary station of the plurality of secondary stations indicating an interest in the service also indicates a quality level for receiving the service.

16. (Previously Presented) The method as claimed in claim 15, wherein the primary station transmits a higher quality level of service in a mode different from the transmission of a lower quality level of service.

17. (Previously Presented) The method as claimed in claim 1, the primary station transmits a basic data stream as a point-to-multipoint transmission and a supplementary data stream for enhancing a quality of the basic data stream as a point-to-point transmission.

18. (Previously Presented) A radio network comprising:
a primary station (PS) and a plurality of secondary stations (SS1, SS2, SS3),
wherein the primary station (PS) includes means for determining an estimated level of interest by users of secondary stations in a service, the means providing a plurality of random access slots that are selectively configured for permitting a temporary

or permanent allocation of a portion of the plurality of random access slots based on the estimated level of interest of the users of the secondary stations,

wherein a secondary station of the plurality of secondary stations indicates the estimated level of interest by transmitting a predetermined signal in a preselected one of the plurality of random access slots, the estimated level of interest based on at least a threshold value.

19. (Previously Presented) The radio network as claimed in claim 18, further comprising estimating means for computing the estimated level of interest from at least a number of transmitted indications and mode selection means for selecting a transmission mode of the service in dependence on whether the estimated level of interest is relatively high or relatively low.

20. (Previously Presented) The radio network as claimed in claim 18, wherein each access slot includes a combination of one time slot and one signature, wherein the primary station (PS) comprises means for mapping each of the plurality of random access slots to a different service such that all the secondary stations interested in one service transmit using one of the plurality of random access slots, and wherein each combination of one time slot and one signature is contained in not more than one of the plurality of random access slots.

21. (Previously Presented) The radio network as claimed in claim 18, further comprising spread spectrum transceiving means and wherein an estimating means is

adapted to estimate the level of interest by estimating a number of correlation peaks in a respective random access slot.

22. (Previously Presented) The radio network as claimed in claim 18, further comprising spread spectrum transceiving means and wherein an estimating means is adapted to estimate the level of interest by estimating a received energy in a respective random access slot.

23. (Previously Presented) A primary station for use in a radio network comprising:

at least one primary station (PS) and a plurality of secondary stations (SS1, SS2, SS3),

wherein the primary station (PS) includes means for determining an estimated level of interest by users of secondary stations in a service, the means providing a plurality of random access slots that are selectively configured for permitting a temporary or permanent allocation of a portion of the plurality of random access slots based on the estimated level of interest of the users of the secondary stations,

wherein a secondary station of the plurality of secondary stations indicates the estimated level of interest by transmitting a predetermined signal in a preselected one of the plurality of random access slots, the estimated level of interest based on at least a threshold value.

24. (Previously Presented) A secondary station for use in a radio network comprising:

a primary station (PS) and a plurality of the secondary stations (SS1, SS2, SS3),

wherein the primary station (PS) includes means for determining an estimated level of interest by users of secondary stations in a service, the means providing a plurality of random access slots that are selectively configured for permitting a temporary or permanent allocation of a portion of the plurality of random access slots based on the estimated level of interest of the users of the secondary stations,

wherein a secondary station of the plurality of secondary stations indicates the estimated level of interest by transmitting a predetermined signal in a preselected one of the plurality of random access slots, the estimated level of interest based on at least a threshold value.